WHAT IS CLAIMED IS:

1. A ceramic honeycomb filter comprising pluralities of ceramic honeycomb structures each having large numbers of flow paths partitioned by cell walls, which are bonded in the direction of said flow paths, predetermined flow paths being sealed by plugs, plugs formed at one end of at least one honeycomb structure being bonded to at least part of plugs formed at one end of a honeycomb structure adjacent to said end of this honeycomb structure.

2. The ceramic honeycomb filter according to claim 1, wherein a first ceramic honeycomb structure with predetermined flow paths sealed by plugs at one end is bonded to a second ceramic honeycomb structure with predetermined flow paths sealed by plugs at both ends, such that said first ceramic honeycomb structure is on an upstream side.

3. The ceramic honeycomb filter according to claim 1 or 2, wherein a ratio A/B of the length A of the plugs at one end of one honeycomb structure to the length B of the plugs at one end of the other honeycomb structure is 1/9-9/1 in the bonded plugs.

4. The ceramic honeycomb filter according to any one of claims 1-3, wherein pluralities of ceramic honeycomb structures are provided with an integral outer wall.

5. The ceramic honeycomb filter according to any one of claims 1-4, wherein a catalyst is supported by said cell walls and/or at least part of said plugs.

6. A method for producing a ceramic honeycomb filter with predetermined flow paths sealed by plugs, wherein in the bonding of pluralities of ceramic honeycomb structures each having large numbers of flow paths partitioned by cell walls in the direction of said flow paths, plugs formed at one end of at least one honeycomb structure are bonded to at least part of plugs formed at one end of a honeycomb structure adjacent to this honeycomb structure.

7. The method for producing a ceramic honeycomb filter according to claim 6, comprising cutting one monolithic ceramic honeycomb structure substantially perpendicularly to said flow paths to form pluralities of ceramic honeycomb structures, abutting the ends of the cut ceramic honeycomb structures, such that at least part of plugs in said ceramic honeycomb structures at ends are abutted to each other.

8. The method for producing a ceramic honeycomb filter according to claim 6 or 7, wherein at least part of plugs formed at one end of said ceramic honeycomb structure have protruding portions.